

1     **CLAIMS**

2     What is claimed is:

3           1. A polyaxial impact wrench for applying torque to bolts  
4     and nuts comprising a working end configured to closely contact  
5     the periphery of the head of a bolt or a nut, an elongated  
6     shank rigidly extending from said working end, a sleeve mounted  
7     on said elongated shank for circumferential rotation about the  
8     longitudinal axis of said shank, said sleeve having a lock to  
9     fix said sleeve at different circumferential positions about  
10    said shank, said sleeve having connector means for connecting  
11    an impact tool at different angles to said longitudinal axis of  
12    said shank whereby torque is supplied to said working end at  
13    varying angles to said longitudinal axis and circumferentially  
14    of said shank.

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16           2. A polyaxial impact wrench for applying torque to bolts  
17    and nuts comprising a working end configured to closely contact  
18    the periphery of the head of a bolt or a nut, an elongated  
19    shank rigidly extending from said working end, a sleeve mounted  
20    on said elongated shank for rotation about the longitudinal  
21    axis of said shank, said sleeve having a lock to fix said  
22    sleeve at different circumferential positions about said shank,  
23    a flange on said sleeve extending along said longitudinal axis,  
24    said flange having a plurality of connectors adapted to

1     removably attach to an impact tool whereby torque can be  
2     applied universally to said working end through a vertical and  
3     horizontal arc.

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5             3. A polyaxial impact wrench of claim 2 comprising the  
6     free edge of said flange shaped in an arc, a power pin located  
7     at the center of said arc, a plurality of detents located about  
8     the edge of said arc, an arm pivotally connected to said power  
9     pin, said arm having a pawl removably contacting one of said  
10    plurality of detents fixing an angle between said arm and said  
11    longitudinal axis, said arm adapted to connect to an impact  
12    tool.

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14            4. A polyaxial impact wrench of claim 3 comprising said  
15    detents are apertures through said flange and said pawl is a  
16    pin connected to said arm.

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18            5. A polyaxial impact wrench of claim 2 comprising said  
19    shank having shaped longitudinal surfaces, said sleeve having  
20    cooperating longitudinal shapes providing said lock.

1           6.    A polyaxial impact wrench of claim 2 comprising an  
2    enlarged shoulder on said shank to engage one end of said  
3    sleeve, screw threads   on said shank, a nut on said shank  
4    engaging said screw threads and said sleeve, said shoulder and  
5    said nut providing said lock when tightened.

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